Patent claims

1) A transmission, preferably a superimposition transmission for a superimposition steering unit, in which a steering angle set by the driver can, in the event of need, be superimposed by an additional angle, with at least two toothed gears, characterized in that, at least one first toothed gear is provided in the transmission, which toothed gear is designed with reference to low noise level and assumes the transmission of force in the case of normal transmission function, and that, at least one second toothed gear is provided in the transmission, which toothed gear is designed with reference to the transmission of force in the event of an overload of the transmission function.

2) A transmission in accordance with claim 1, characterized in that, the first toothed gear is designed with reference to low vibration level and/or low play.

3) A transmission in accordance with claim 1 or 2, characterized in that, the event of a transmission function overload is present from a specific momentum boundary value, which the transmission does not exceed during normal operation.

4) A transmission in accordance with one of the claims 1 to 3, characterized in that, the second toothed gear comes into engagement after a specific elastic deformation of the first toothed gear.

5) A transmission, preferably a superimposition transmission for a superimposition steering unit, in which a steering angle set by the driver can, in the event of need, be superimposed by an additional angle, with at least two toothed gears, particularly in accordance with one of the claims 1 to 4, characterized in that, at least one first toothed gear and one second toothed gear are provided in the transmission, where the first and the second toothed gears have different physical characteristics.

6) A transmission in accordance with one of the claims 1 to 5, characterized in that, the second toothed gear is harder than the first toothed gear.

7) A transmission in accordance with one of the claims 1 to 6, characterized in that, the second toothed gear is more stable in its shape than the first toothed gear.

8) A transmission in accordance with one of the claims 1 to 7, characterized in that, the first and second toothed gears have different moduli of elasticity (E-moduli).

9) A transmission in accordance with one of the claims 1 to 8, characterized in that, the first and the second toothed gear consist, in at least one partial area, of different materials or of a combination of different materials, as the case may be.

10) A transmission in accordance with claim 9, characterized in that, a metallic material and a plastic are used as the different materials.

11) A transmission in accordance with one of the claims 1 to 10, characterized in that, the first and the second toothed gears are positioned next to one another in the axial direction.

12) A transmission in accordance with claim 11, characterized in that, the first toothed gear is offset radially from the second toothed gear by a positive profile displacement.

13) A transmission in accordance with one of the claims 1 to 12, characterized in that, the transmission has a straight gearing.

14) A transmission in accordance with one of the claims 1 to 13, characterized in that, the transmission is a planetary transmission.

15) A transmission in accordance with claim 14, characterized in that, the first and the second toothed gears are planetary wheels in the planetary transmission.

16) A transmission in accordance with claim 15, characterized in that, the first and the second planetary wheels have a radially non-rigid suspension or support bearing.